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Ref: 21270

25th October 2022

Brett Hutton
JCDecaux
Unit 2-3, 182-190 Euston Rd,
Alexandria NSW 2015

RE: Pacific Hwy, Pymble, NSW,
Supersite LED, Structural Feasibility Statement

This Structural Feasibility Statement has been conducted by Dennis Bunt Consulting Engineers Pty Ltd (DBCE) at the request of JCDecaux.

The proposed sign is documented in the DA drawings by DBCE 21270 / DA01(B) and DA02(D).

A survey of the site was commissioned by JCDecaux.

The signage will consist of a single LED screen with the visual screen dimensions being 12480mm horizontally x 3200mm vertically. The top of the LED screen will be approximately 7.6m above the adjacent Pacific Hwy footpath and 5.2m above the top of the ground in which it will be located. There will be a 650mm skirt under the sign consisting of black ACM sheet.

Site Description

The site is located in an area with grass and low level bushes between the Pacific Hwy footpath to the west and a Sydney Trains fence to the east. The Sydney Trains fence is to restrict access to the Sydney Trains railway tracks on other side of the fence. The ground slopes at approximately 30 degrees from the fence to an existing brick retaining wall adjacent to the footpath where there is a 1m drop to the level of the footpath.

There is an existing supersite backlit sign box that will be removed. The existing steel support structure will also be removed. The pile footings will remain and be reused or replaced if required depending on the calculations by the structural engineer.

The sign box will be located at the same angle to the road as the previous sign and moved back slightly so that it is centred over the top of the existing piles. This will cause one corner of the sign box to extend about 300mm beyond the fence line requiring the fence to be locally modified around the new sign box.

A retaining wall will be constructed in front of the LED screen footings so the height between the underside of the screen and the ground level in front is increased by 1m to make vandalism of the screen more difficult.

There will be a walkway inside the sign box to access the rear of the screens for maintenance. A platform will be fixed to the rear of the box and a doorway to enable access of the sign box.

Structural Description

Steel frame

The structure will consist of a rectangular steel box which will act as a three dimensional (3D) welded steel frame.

Three new steel columns will be fixed to the concrete footings and cantilever vertically upwards approximately 2m.

The soffit of the 3D sign box will be fixed to the top of the 3 columns.

The LED screens will be assembled in the contractor's factory and clamped to the 3D box so it can be transported to site as one unit.

The new columns will be fixed to the existing footings and bolted to the underside of the sign box.

The weight of the structure including the 3D box, the digital screen, the cladding and the support columns will be approximately 5 tonnes.

The sign is to be designed for a wind load for region A, terrain category 2.5 and a 50 year design life in accordance with AS1170.2.

Footings

The existing pile footings are to be reused if possible, or replaced with similar but larger footings depending on the structural engineer's calculations.

The size of the new LED screen and height above ground will be the same as the existing box so the overturning moment will be the same. The weight of the box will be approximately 2 tonnes greater than the previous sign and the new sign box will be moved to be centred over the piles.

Recommendations

Based on the survey and our preliminary design we see no reason why the LED supersite signage cannot be installed.

A structural engineer to assess whether the existing footings can be reused or new larger piles required.

A geotechnical report is commissioned to provide information on the soil profile.

A services search is undertaken if new pile footings are required.

If you have any questions, please do not hesitate to ring the undersigned on 9451 7757

Yours Faithfully,

A handwritten signature in blue ink, appearing to read 'J Linsell', with a stylized, cursive script.

John Linsell BE(Hons), MIEAust, CPEng, NPER(Struct)
for Dennis Bunt Consulting Engineers Pty Ltd